

REMARKS

Claims 1-22 are pending in this application. By this Amendment, claims 1, 2, 8, 9, 10, 15, 16, 17, and 22 have been amended. These amendments are being made to facilitate early allowance of the presently claimed subject matter. Applicants do not acquiesce in the correctness of the objections and rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the above amendments and following remarks is respectfully requested.

In the Office Action, claims 1, 9, and 16 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Elzur (US Publ. No. 2003/0172342). Claims 2-8, 10-15, and 17-22 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Elzur and further in view of Kagan et al. (US Publ. No. 2002/0152315). Applicants respectfully traverse the Office's rejection on the following grounds.

With respect to independent claim 1, Applicants assert that neither Kagan nor Elzur, independently or in combination, teach or suggest each and every element of the claimed invention. For example, Applicants assert that the cited references do not disclose "placing each out-of-order RDMA message to a reassembly buffer, wherein each in-order RDMA message bypasses the **reassembly buffer** and is sent to an **internal data buffer** for direct placement to a **destination buffer**," as recited in claim 1. (Emphasis added). Applicants have amended claim 1 and contend that support for this amendment is in the Application, page 20, paragraphs [0055] and [0056]. The Office asserts that Elzur allegedly discloses these features and points to paragraphs [0038] and [0042] of Elzur. See Final Office Action, pages 2 and 5. More

specifically, the Office asserts that “Elzur discloses a temporary buffer for out-of-order messages and sending non-out-of-order messages to memory (buffer)”. See *Id.*, page 5. However, Applicants respectfully disagree with the Office’s assertion.

Applicants have reviewed the cited paragraphs and contend that Elzur fails to disclose the reassembly buffer, the internal data buffer, and the destination buffer. In paragraph [0038], Elzur describes the framing header 70 or a marker header and the ULP header 110. In particular, Elzur provides that the “ULP header 100 may include specific information as to which memory (e.g., an application buffer) and, specifically, where in the memory of the receiver 10 the payload 100 should be placed (e.g., stored).” See Elzur, paragraph [0038]. In other words, the ULP header of Elzur will identify where in memory the information will be stored, not whether a message is in-order or is out-of-order. Further, there is no disclosure of differentiating between an in-order and an out-of-order message to determine *which buffer* to send the message to. Elzur simply provides that the ULP header will determine *where* in the memory the information will be stored. Elzur fails to disclose that it is in-order RDMA messages that are sent to an internal data buffer that is for direct placement to a destination buffer.

Further, Applicants maintain Elzur fails to disclose the reassembly buffer as it is disclosed in claim 1. For example, claim 1 recites “such that the out-of-order RDMA messages are reassembled in-order in the reassembly buffer.” The reassembly buffer reassembles the out-of-order RDMA messages. In contrast, Elzur, in paragraph [0042], discloses that if “the TCP segment is received out of order with no marker … the receiver places the TCP segment it has received in a temporary buffer (or drops the TCP segment and processes only in order), thereby eliminating any need for a buffer with a slight performance degradation”. The temporary buffer is a place to hold out-of-order TCP segments until there is a buffer of sufficient size available,

not to reassemble the messages.

Applicants also assert that Elzur and Kagan fail to disclose “the information stored for RDMA Read messages includes at least a number of pending RDMA Read Request messages waiting for a doorbell ring in a connection context on a per TCP hole basis or a number of completed RDMA Read Response messages on a per TCP hole basis.” See claim 1.

In light of these arguments, Applicants maintain that Elzur, independently or in combination with Kagan, does not teach or suggest each and every element of the claim 1. The Office presented similar rejections with respect to independent claims 9 and 16 and Applicants has made similar amendments to these claims. Accordingly, Applicants assert that Elzur and Kagan also fail to disclose the features of claims 9 and 16.

With regard to the Office’s other arguments regarding dependent claims, Applicants herein incorporate the arguments presented above with respect to independent claims listed above. In addition, Applicants submit that all defendant claims are allowable based on their own distinct features. However, for brevity, Applicants will forego addressing each of these rejections individually, but reserve the right to do so should it become necessary. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

CONCLUSION

In view of the foregoing arguments, Applicants respectfully submit that the application is in condition for allowance. Should the Examiner believe that anything further is necessary to place the application in better condition for allowance, he is requested to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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